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TECHNICAL NOTE

FOREST INSECTS AND DISEASES IN CAPE BRETON HIGHLANDS NATIONAL PARK IN 1988

Personnel of the Forest Insect and Disease Survey regularly survey national parks for forest insect and disease conditions. Some of the conditions encountered in the Cape Breton Highlands National Park in 1988 are briefly discussed below.

Birch skeletonizer, a minute insect, causes late summer browning of birch foliage and premature leaf drop. Trees are not seriously affected unless high populations persist for several years. The highest level of damage was observed southwest of Neils Harbour, where all of the leaves were skeletonized, and at Pillar Rock near the Cheticamp Park entrance; elsewhere damage was light.

Birch casebearers construct a cigar-shaped case of leaf fragments and mine the leaves of birch and alder from within this case. Population levels declined from last year. Damage was mostly light on white birch, about 10% at French Lake, Fox Back Lake, MacKenzie Mountain and Fern Brook, with trace damage at Robert Brook.

Deterioration of white birch is characterized by a chocolate-brown discoloration and a scorched-like appearance of the leaves, at times restricted to the leaf margins. Affected leaves curl and start dropping as early as mid-August. The cause of this condition is presently unknown. The damage levels of discoloration were light throughout the Park. This condition of white birch has been evident along the Fundy Coast in New Brunswick and in parts of Nova Scotia for several years.

Spruce budmoths feed on the developing buds of white spruce under the bud cap, which the insect secures to the growing shoot with silk. Damage was evident throughout the Park in 1988, with the number of affected shoots averaging 9%. The highest damage was recorded at Grand Anse River Valley, where 21% of the shoots were affected, and at French Lake, where 17% were afffected.

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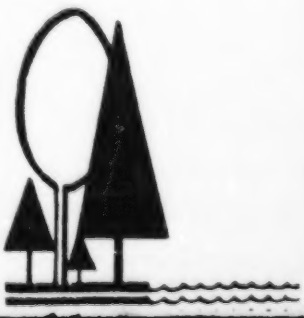

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Spruce beetles usually attack trees which have been weakened by such factors as age or defoliation. However, where spruce beetle populations are high, healthy trees may be attacked. This beetle continues to cause mortality of white spruce in the Park, but new attacks have been on the decline in recent years. Examination of spruce beetle attacked stands revealed that 52% of the trees were healthy, 19% were infested but living, 4% were newly killed and 25% were old dead.

Eastern spruce gall aphids, an introduced species, feed only on spruce. Galls form on new shoots and cause the foliage to take on a ragged appearance. The aphids can render ornamental trees unsightly and can retard growth of potential shade trees. White spruce were damaged throughout the Park, with an average of 5% of the shoots affected; the highest incidence was 7% at French Lake.

Balsam woolly adelgids feed on cell sap beneath the bark on all parts of balsam fir from the root collar to the crown. There are two types of damage: stem attack, which when heavy can cause tree mortality, and crown attack, which results in pronounced swelling of shoots, branch mortality, impairment of height growth, umbrella-shaped tops, and sometimes death of the tree. Only crown attack was observed throughout the Park on balsam fir trees. Damage was trace to light, with the highest incidence occurring at Big Intervale, where 28% of the trees were affected.

Balsam twig aphids cause stunting and curling of the new needles, giving a ruffled appearance to the foliage. The population levels were trace to light throughout the Park, with the highest incidence occurring at French Lake, where 20% of the shoots were affected.

Balsam gall midges; which feed inside galls on balsam fir needles, caused trace to light damage on trees throughout the Park, with the highest incidence being 7% at French Lake.

Ocean salt spray caused severe damage to white spruce and light damage to hardwoods between LaBlogue and Corney Brook.

Spruce budworm caused widespread devastation to the coniferous forests in the Park during the 1970s and early 1980s. No damage was noted in the Park in 1988.

Gypsy moths are a major pest of forest and shade trees in many parts of the United States, southern Ontario, and southern Quebec. This insect has been found recently in western Nova Scotia. Twenty-five gypsy moth traps were placed in the Park by Parks personnel in 1988, as part of the province-wide gypsy moth monitoring program. No moths were caught this year, for the third consecutive year. All Park visitors who find suspected gypsy moths should report them to Park personnel.

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March, 1989